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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,906	03/26/2004	Rahul Surana	008089 USA/MTCG/PCTRL	7260
7590 Applied Materials, Inc. P.O. Box 450A Santa Clara, CA 95052			EXAMINER MCDONALD, SHANTESE L	
			ART UNIT 3723	PAPER NUMBER
			MAIL DATE 05/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/809,906

Applicant(s)

SURANA ET AL.

Examiner

Shantese L. McDonald

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/8/04, 12/7/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redeker in view of Hewett et al.

Redeker et al. teaches a method for qualifying a semiconductor manufacturing tool, by using a computer readable medium, 90, comprising transferring a single patterned wafer to a bulk removal polishing platen, (col. 7, lines 31-63), measuring in situ bulk removal polishing platen characteristics, which include polishing rate, nonuniformity and defectivity, from the wafer during the processing by the bulk removal polishing platen, using an eddy current measuring sensor implemented at the bulk removal polishing platen, (col. 9, lines 57-59), qualifying the bulk removal polishing platen by adjusting one or more parameters of a recipe in accordance with the one or more bulk removal polishing platen characteristics, (col. 10, lines 46-61). Redeker et al. also teaches transferring the wafer to a copper clearing platen, measuring in situ, using a laser interferometer, (col. 8, lines 57-65 and col. 11, lines 19-20), copper clearing platen qualification characteristics from the wafer during processing by the copper clearing platen, and qualify the copper clearing platen by adjusting one or more parameters of the recipe, (col. 10, line 62-col. 11, line 54), and transferring a wafer to a

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barrier removal polishing platen, measuring in situ, using an optical sensor, (col. 11, lines 64-65), barrier removal platen qualification characteristics and qualifying the barrier removal polishing platen by adjusting one or more parameters of the recipe, (col. 11, lines 55-67). Redeker teaches all the limitations of the claims except adjusting one or more parameters of a process recipe in accordance with the one or more bulk removal polishing platens, adjusting one or more parameters of the recipe revised during the bulk removal in accordance with the one or more copper clearing platens, and adjusting one or more parameters of the recipe revised in the copper clearing removal in accordance with one or more barrier removal platens and using the revised recipe in the processing one or more subsequent wafers by the bulk, copper and barrier removal platens. Hewett et al. teaches adjusting one or more parameters of a process recipe in accordance with the one or more bulk removal polishing platens, adjusting one or more parameters of the recipe revised during the bulk removal in accordance with the one or more copper clearing platens, and adjusting one or more parameters of the recipe revised in the copper clearing removal in accordance with one or more barrier removal platens and using the revised recipe in the processing one or more subsequent wafers by the bulk, copper and barrier removal platens, (col. 3, line 32- col. 8, line 33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the polishing method of Redeker with the above listed recipe adjusting limitations, as taught by Hewett, in order to enhance the polishing accuracy, and since both inventions teach polishing wafers with a barrier, copper and bulk layer.

Response to Arguments

Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantese L. McDonald whose telephone number is (571) 272-4486. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



S.L.M.
May 2, 2007

Joseph J. Hail, III
Supervisory Patent Examiner
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